ELSEVIER

Biophysical Chemistry 57 (1996) 297–298

Biophysical Chemistry

Author Index to Volume 57

Abney, J.R. and Scalettar, B.A.
Fluctuations and membrane heterogeneity 27
Alexov, E., see Ohshima, H. 189

Bloomfield, V.A., see Dwyer, J.D. 55
Borowski, E., see Mazerski, J. 205
Busscher, H.J., see Van der Vegt, W. 253

Chen, Z. and Sadana, A.
An analysis of antigen–antibody binding kinetics for biosensor applications utilized as a model system: influence of non-specific binding 177

Dasgupta, D., see Sen, R. 269
Dijk, J., see Wills, P.R. 37
Dwyer, J.D. and Bloomfield, V.A.
Brownian dynamics simulation of probe diffusion in DNA: effects of probe size, charge and DNA concentration 55

Fine, R.M., see Schmidt, A.B. 219

Georgalis, Y., see Wills, P.R. 37
Gryczynski, I., Razynska, A. and Lakowicz, J.R.
Two-photon induced fluorescence of linear alkanes; a possible intrinsic lipid probe 291

Ha, V.H., see Papp, E. 155
Hall, D.R., Jacobsen, M.P. and Winzor, D.J.
Stabilizing effect of sucrose against irreversible denaturation of rabbit muscle lactate dehydrogenase 47
Herzfeld, J., see Kulp, D.T. 93

Iida, S.
Interaction of calcium ions and polyelectrolytes 133

Jacobsen, M.P., see Hall, D.R. 47

Korzeniewski, B.
Simulation of state 4→ state 3 transition in isolated mitochondria 143
Kosevich, M.V., Shelkovsky, V.S. and Stepanian, S.G.
Dependence of the biological activity and mass spectrometric pattern on the structure peculiarities of the molecule of alkylating drug thiotepa 123

Kulp, D.T. and Herzfeld, J.
Crowding-induced organization of cytoskeletal elements. III. Spontaneous bundling and sorting of self-assembled filaments with different flexibilities 93

Lakowicz, J.R., see Gryczynski, I. 291
Lapanje, S., see Poklar, N. 279
Laurent, T.C.
An early look at macromolecular crowding 7
Lindner, R. and Ralston, G.
Effects of dextran on the self-association of human spectrin 15

Mazerski, J. and Borowski, E.
Molecular dynamics of amphotericin B. II. Dimer in water 205
Minton, A.P.
A molecular model for the dependence of the osmotic pressure of bovine serum albumin upon concentration and pH 65
Minton, A.P.
Macromolecular crowding: a foreword 1
Mishonova, E., see Ohshima, H. 189
Murphy, L.D. and Zimmerman, S.B.
Condensation and cohesion of λ DNA in cell extracts and other media: Implications for the structure and function of DNA in prokaryotes 71

Nishio, T.
Monte Carlo studies on potentiometric titration of (carboxymethyl)cellulose 261

Ogston, A.G.
Personal Recollections 3
Ohshima, H., Mishonova, E. and Alexov, E.
Electrostatic interaction between two charged spherical molecules 189

Papp, E. and Ha, V.H.
Local analysis of the M state kinetics of bacteriorhodopsin 155
Parsegian, V.A., see Podgornik, R. 111
Podgornik, R., Strey, H.H., Rau, D.C. and Parsegian, V.A.
Watching molecules crowd: DNA double helices under osmotic stress 111
Poklar, N., Vesnaver, G. and Lapanje, S.
Interactions of α-chymotrypsinogen A with alkylureas 279

Ralston, G., see Lindner, R. 15
Rau, D.C., see Podgornik, R. 111
Razynska, A., see Gryczynski, I. 291

Sadana, A., see Chen, Z. 177
Scalettar, B.A., see Abney, J.R. 27
Schmidt, A.B. and Fine, R.M.
Size effects in nonpolar solvation: lessons from two simple models 219
Sen, R. and Dasgupta, D.
Conformational changes of *E. coli* RNA polymerase during transcription initiation 269
Shelkovsky, V.S., see Kosevich, M.V. 123
Shobana, S. and Vishveshwara, S.
Conformational study of valinomycin: a molecular dynamics approach 163
Stepanian, S.G., see Kosevich, M.V. 123
Strey, H.H., see Podgornik, R. 111

Thron, C.D.
A model for a bistable biochemical trigger of mitosis 239

Van der Mei, H.C., see Van der Vegt, W. 253
Van der Vegt, W., Van der Mei, H.C., Wösten, H.A.B., Wessels, J.G.H. and Busscher, H.J.
A comparison of the surface activity of the fungal hydrophobin SC3p with those of other proteins 253
Vesnaver, G., see Poklar, N. 279
Vishveshwara, S., see Shobana, S. 163

Wahl, P.
Fluorescence recovery after photobleaching of suspensions of vacuoles 225
Wessels, J.G.H., see Van der Vegt, W. 253
Wills, P.R., Georgalis, Y., Dijk, J. and Winzor, D.J.
Measurement of thermodynamic nonideality arising from volume-exclusion interactions between proteins and polymers 37
Wills, P.R., see Winzor, D.J. 103
Winzor, D.J. and Wills, P.R.
Thermodynamic nonideality of enzyme solutions supplemented with inert solutes: yeast hexokinase revisited 103
Winzor, D.J., see Hall, D.R. 47
Winzor, D.J., see Wills, P.R. 37
Wösten, H.A.B., see Van der Vegt, W. 253

Zimmerman, S.B., see Murphy, L.D. 71

ELSEVIER

Biophysical Chemistry 57 (1996) 299–303

Biophysical Chemistry

Subject Index to Volume 57

Acrylamide quenching
RNA polymerase; Fluorescence; TbGTP complex (Sen, R. 269)

Actin
Statistical thermodynamics; Cytoskeleton; Bundles; Microtubules; Excluded volume; Flexibility (Kulp, D.T. 93)

Alanine-analog
Valinomycin; Molecular dynamics; Conformation search (Shobana, S. 163)

Alkylureas
Urea; Solvation; Gibbs free energy (Poklar, N. 279)

Amphotericin B
Molecular dynamics in water; Dimer structure; Antifungal antibiotic; Conformational flexibility (Mazerski, J. 205)

Antifungal antibiotic
Molecular dynamics in water; Dimer structure; Amphotericin B; Conformational flexibility (Mazerski, J. 205)

Antigen–antibody binding kinetics
Non-specific binding; Biosensor applications (Chen, Z. 177)

Bacteriorhodopsin
Photocycle; Sequential; Branching (Papp, E. 155)

Biosensor applications
Non-specific binding; Antigen–antibody binding kinetics (Chen, Z. 177)

Bovine serum albumin
Osmotic pressure; Proteins (Minton, A.P. 65)

Branching
Bacteriorhodopsin; Photocycle; Sequential (Papp, E. 155)

Brownian dynamics
Probe diffusion; DNA; Polyelectrolytes; Macromolecular crowding; Electrostatics; Hydrodynamics (Dwyer, J.D. 55)

Bundles
Statistical thermodynamics; Cytoskeleton; Actin; Microtubules; Excluded volume; Flexibility (Kulp, D.T. 93)

Calcium
Poly(acrylic acid); Poly(methacrylic acid); Counterion condensation; Polyelectrolytes (Iida, S. 133)

Cdc2
$p13^{suc1}$; Cdc25; Wee1; Cyclin B; Maturation promoting factor; Cell cycle; Mathematical model (Thron, C.D. 239)

Cdc25
$p13^{suc1}$; Cdc2; Wee1; Cyclin B; Maturation promoting factor; Cell cycle; Mathematical model (Thron, C.D. 239)

Cell cycle
$p13^{suc1}$; Cdc2; Cdc25; Wee1; Cyclin B; Maturation promoting factor; Mathematical model (Thron, C.D. 239)

Chemotherapeutic alkylating drug thiotepa
MNDO quantum mechanical calculations; Hydration; Soft ionization mass spectrometry; Structure–activity links (Kosevich, M.V. 123)

Computer simulation
Oxidative phosphorylation; Dynamic model; Metabolic control analysis; Metabolic regulation (Korzeniewski, B. 143)

Conformational flexibility
Molecular dynamics in water; Dimer structure; Antifungal antibiotic; Amphotericin B (Mazerski, J. 205)

Conformation search
Valinomycin; Alanine-analog; Molecular dynamics (Shobana, S. 163)

Counterion condensation
Poly(acrylic acid); Poly(methacrylic acid); Calcium; Polyelectrolytes (Iida, S. 133)

Crowding
Excluded volume; Electrophoresis; Oligomers; Non-ideality (Lindner, R. 15)

Cyclin B
$p13^{suc1}$; Cdc2; Cdc25; Wee1; Maturation promoting factor; Cell cycle; Mathematical model (Thron, C.D. 239)

Cylindrical cell system
Potentiometric titration; Monte Carlo simulation; Linear polyelectrolyte; (Carboxymethyl)cellulose (CMC) (Nishio, T. 261)

Cytoskeleton
Statistical thermodynamics; Bundles; Actin; Microtubules; Excluded volume; Flexibility (Kulp, D.T. 93)

Diffusion
Theory of FRAP; Vacuoles transport (Wahl, P. 225)

Dimer structure
Molecular dynamics in water; Antifungal antibiotic; Amphotericin B; Conformational flexibility (Mazerski, J. 205)

DNA
Brownian dynamics; Probe diffusion; Polyelectrolytes; Macromolecular crowding; Electrostatics; Hydrodynamics (Dwyer, J.D. 55)

Osmotic stress; Molecular crowding; X-ray scattering (Podgornik, R. 111)

DNA-binding proteins
Nucleoid; *Escherichia coli*; Macromolecular crowding; Protein HU; Spermidine (Murphy, L.D. 71)

Dynamic model
Oxidative phosphorylation; Computer simulation; Metabolic control analysis; Metabolic regulation (Korzeniewski, B. 143)

Electron microscopy
Fluorescence correlation spectroscopy; Monte Carlo simulations; Membrane domains; Membrane protein; Protein–protein interactions (Abney, J.R. 27)

Electrophoresis
Excluded volume; Crowding; Oligomers; Non-ideality (Lindner, R. 15)

Electrostatic interaction
Spherical molecules; Potential distribution (Ohshima, H. 189)

Electrostatics
Brownian dynamics; Probe diffusion; DNA; Polyelectrolytes; Macromolecular crowding; Hydrodynamics (Dwyer, J.D. 55)

Enzyme isomerization
Excluded volume; Hexokinase; Molecular crowding; Thermodynamic nonideality (Winzor, D.J. 103)

Escherichia coli
Nucleoid; Macromolecular crowding; Protein HU; DNA-binding proteins; Spermidine (Murphy, L.D. 71)

Excluded volume
Electrophoresis; Crowding; Oligomers; Non-ideality (Lindner, R. 15)

Molecular crowding; Protein–polymer interactions; Second virial coefficients; Thermodynamic nonideality (Wills, P.R. 37)

Lactate dehydrogenase; Molecular crowding; Protein stabilization; Thermodynamic nonideality (Hall, D.R. 47)

Statistical thermodynamics; Cytoskeleton; Bundles; Actin; Microtubules; Flexibility (Kulp, D.T. 93)

Enzyme isomerization; Hexokinase; Molecular crowding; Thermodynamic nonideality (Winzor, D.J. 103)

Exclusion
Polysaccharide; Macromolecular interaction; Semidilute systems; Sieve effects; Ordered convection (Laurent, T.C. 7)

Flexibility
Statistical thermodynamics; Cytoskeleton; Bundles; Actin; Microtubules; Excluded volume (Kulp, D.T. 93)

Fluorescence
RNA polymerase; Acrylamide quenching; TbGTP complex (Sen, R. 269)

Fluorescence correlation spectroscopy
Electron microscopy; Monte Carlo simulations; Membrane domains; Membrane protein; Protein–protein interactions (Abney, J.R. 27)

Gibbs free energy
Urea; Alkylureas; Solvation (Poklar, N. 279)

Hexokinase
Excluded volume; Enzyme isomerization; Molecular crowding; Thermodynamic nonideality (Winzor, D.J. 103)

Hydration
Chemotherapeutic alkylating drug thiotepa; MNDO quantum mechanical calculations; Soft ionization mass spectrometry; Structure–activity links (Kosevich, M.V. 123)

Hydrodynamics
Brownian dynamics; Probe diffusion; DNA; Polyelectrolytes; Macromolecular crowding; Electrostatics (Dwyer, J.D. 55)

Hydrophobin
Interfacial tension; Protein adsorption; *Schizophyllum commune*; Wettability (Van der Vegt, W. 253)

Interfacial tension
Hydrophobin; Protein adsorption; *Schizophyllum commune*; Wettability (Van der Vegt, W. 253)

Lactate dehydrogenase
Excluded volume; Molecular crowding; Protein stabilization; Thermodynamic nonideality (Hall, D.R. 47)

Lennard–Jones fluids
Solvation; Ornstein–Zernike equation (Schmidt, A.B. 219)

Linear polyelectrolyte
Potentiometric titration; Monte Carlo simulation; Cylindrical cell system; (Carboxymethyl)cellulose (CMC) (Nishio, T. 261)

Lipid probe
Two-photon excitation; Vacuum ultraviolet (Gryczynski, I. 291)

Macromolecular crowding
Brownian dynamics; Probe diffusion; DNA; Polyelectrolytes; Electrostatics; Hydrodynamics (Dwyer, J.D. 55)

Nucleoid; *Escherichia coli*; Protein HU; DNA-binding proteins; Spermidine (Murphy, L.D. 71)

Macromolecular interaction
Polysaccharide; Semidilute systems; Sieve effects; Exclusion; Ordered convection (Laurent, T.C. 7)

Mathematical model
$p13^{suc1}$; Cdc2; Cdc25; Wee1; Cyclin B; Maturation promoting factor; Cell cycle (Thron, C.D. 239)

Maturation promoting factor
$p13^{suc1}$; Cdc2; Cdc25; Wee1; Cyclin B; Cell cycle; Mathematical model (Thron, C.D. 239)

Membrane domains
Electron microscopy; Fluorescence correlation spectroscopy; Monte Carlo simulations; Membrane protein; Protein–protein interactions (Abney, J.R. 27)

Membrane protein
Electron microscopy; Fluorescence correlation spectroscopy; Monte Carlo simulations; Membrane domains; Protein–protein interactions (Abney, J.R. 27)

Metabolic control analysis
Oxidative phosphorylation; Dynamic model; Computer simulation; Metabolic regulation (Korzeniewski, B. 143)

Metabolic regulation
Oxidative phosphorylation; Dynamic model; Computer simulation; Metabolic control analysis (Korzeniewski, B. 143)

Microtubules
Statistical thermodynamics; Cytoskeleton; Bundles; Actin; Excluded volume; Flexibility (Kulp, D.T. 93)

MNDO quantum mechanical calculations
Chemotherapeutic alkylating drug thiotepa; Hydration; Soft ionization mass spectrometry; Structure–activity links (Kosevich, M.V. 123)

Molecular crowding
Excluded volume; Protein–polymer interactions; Second virial coefficients; Thermodynamic nonideality (Wills, P.R. 37)

Excluded volume; Lactate dehydrogenase; Protein stabilization; Thermodynamic nonideality (Hall, D.R. 47)

Excluded volume; Enzyme isomerization; Hexokinase; Thermodynamic nonideality (Winzor, D.J. 103)

DNA; Osmotic stress; X-ray scattering (Podgornik, R. 111)

Molecular dynamics
Valinomycin; Alanine-analog; Conformation search (Shobana, S. 163)

Molecular dynamics in water
Dimer structure; Antifungal antibiotic; Amphotericin B; Conformational flexibility (Mazerski, J. 205)

Monte Carlo simulation
Potentiometric titration; Linear polyelectrolyte; Cylindrical cell system; (Carboxymethyl)cellulose (CMC) (Nishio, T. 261)

Electron microscopy; Fluorescence correlation spectroscopy; Membrane domains; Membrane protein; Protein–protein interactions (Abney, J.R. 27)

Non-ideality
Excluded volume; Electrophoresis; Crowding; Oligomers (Lindner, R. 15)

Non-specific binding
Antigen–antibody binding kinetics; Biosensor applications (Chen, Z. 177)

Nucleoid
Escherichia coli; Macromolecular crowding; Protein HU; DNA-binding proteins; Spermidine (Murphy, L.D. 71)

Oligomers
Excluded volume; Electrophoresis; Crowding; Non-ideality (Lindner, R. 15)

Ordered convection
Polysaccharide; Macromolecular interaction; Semidilute systems; Sieve effects; Exclusion (Laurent, T.C. 7)

Ornstein–Zernike equation
Solvation; Lennard–Jones fluids (Schmidt, A.B. 219)

Osmotic pressure
Bovine serum albumin; Proteins (Minton, A.P. 65)

Osmotic stress
DNA; Molecular crowding; X-ray scattering (Podgornik, R. 111)

Oxidative phosphorylation
Dynamic model; Computer simulation; Metabolic control analysis; Metabolic regulation (Korzeniewski, B. 143)

$p13^{suc1}$
Cdc2; Cdc25; Wee1; Cyclin B; Maturation promoting factor; Cell cycle; Mathematical model (Thron, C.D. 239)

Photocycle
Bacteriorhodopsin; Sequential; Branching (Papp, E. 155)

Poly(acrylic acid)
Poly(methacrylic acid); Calcium; Counterion condensation; Polyelectrolytes (Iida, S. 133)

Polyelectrolytes
Brownian dynamics; Probe diffusion; DNA; Macromolecular crowding; Electrostatics; Hydrodynamics (Dwyer, J.D. 55)

Poly(acrylic acid); Poly(methacrylic acid); Calcium; Counterion condensation (Iida, S. 133)

Poly(methacrylic acid)
Poly(acrylic acid); Calcium; Counterion condensation; Polyelectrolytes (Iida, S. 133)

Polysaccharide
Macromolecular interaction; Semidilute systems; Sieve effects; Exclusion; Ordered convection (Laurent, T.C. 7)

Potential distribution
Electrostatic interaction; Spherical molecules (Ohshima, H. 189)

Potentiometric titration
Monte Carlo simulation; Linear polyelectrolyte; Cylindrical cell system; (Carboxymethyl)cellulose (CMC) (Nishio, T. 261)

Probe diffusion
Brownian dynamics; DNA; Polyelectrolytes; Macromolecular crowding; Electrostatics; Hydrodynamics (Dwyer, J.D. 55)

Protein adsorption
Hydrophobin; Interfacial tension; *Schizophyllum commune*; Wettability (Van der Vegt, W. 253)

Protein HU
Nucleoid; *Escherichia coli*; Macromolecular crowding; DNA-binding proteins; Spermidine (Murphy, L.D. 71)

Protein–polymer interactions
Excluded volume; Molecular crowding; Second virial coefficients; Thermodynamic nonideality (Wills, P.R. 37)

Protein–protein interactions
Electron microscopy; Fluorescence correlation spectroscopy; Monte Carlo simulations; Membrane domains; Membrane protein (Abney, J.R. 27)

Proteins
Bovine serum albumin; Osmotic pressure (Minton, A.P. 65)

Protein stabilization
Excluded volume; Lactate dehydrogenase; Molecular crowding; Thermodynamic nonideality (Hall, D.R. 47)

RNA polymerase
Fluorescence; Acrylamide quenching; TbGTP complex (Sen, R. 269)

Schizophyllum commune
Hydrophobin; Interfacial tension; Protein adsorption; Wettability (Van der Vegt, W. 253)

Second virial coefficients
Excluded volume; Molecular crowding; Protein–polymer interactions; Thermodynamic nonideality (Wills, P.R. 37)

Semidilute systems
Polysaccharide; Macromolecular interaction; Sieve effects; Exclusion; Ordered convection (Laurent, T.C. 7)

Sequential
Bacteriorhodopsin; Photocycle; Branching (Papp, E. 155)

Sieve effects
Polysaccharide; Macromolecular interaction; Semidilute systems; Exclusion; Ordered convection (Laurent, T.C. 7)

Soft ionization mass spectrometry
Chemotherapeutic alkylating drug thiotepa; MNDO quantum mechanical calculations; Hydration; Structure–activity links (Kosevich, M.V. 123)

Solvation
Lennard–Jones fluids; Ornstein–Zernike equation (Schmidt, A.B. 219)

Urea; Alkylureas; Gibbs free energy (Poklar, N. 279)

Spermidine
Nucleoid; *Escherichia coli*; Macromolecular crowding; Protein HU; DNA-binding proteins (Murphy, L.D. 71)

Spherical molecules
Electrostatic interaction; Potential distribution (Ohshima, H. 189)

Statistical thermodynamics
Cytoskeleton; Bundles; Actin; Microtubules; Excluded volume; Flexibility (Kulp, D.T. 93)

Structure–activity links
Chemotherapeutic alkylating drug thiotepa; MNDO quantum mechanical calculations; Hydration; Soft ionization mass spectrometry (Kosevich, M.V. 123)

TbGTP complex
RNA polymerase; Fluorescence; Acrylamide quenching (Sen, R. 269)

Theory of FRAP
Vacuoles transport; Diffusion (Wahl, P. 225)

Thermodynamic nonideality
Excluded volume; Molecular crowding; Protein–polymer interactions; Second virial coefficients (Wills, P.R. 37)

Excluded volume; Lactate dehydrogenase; Molecular crowding; Protein stabilization (Hall, D.R. 47)

Excluded volume; Enzyme isomerization; Hexokinase; Molecular crowding (Winzor, D.J. 103)

Two-photon excitation
Lipid probe; Vacuum ultraviolet (Gryczynski, I. 291)

Urea
Alkylureas; Solvation; Gibbs free energy (Poklar, N. 279)

Vacuoles transport
Theory of FRAP; Diffusion (Wahl, P. 225)

Vacuum ultraviolet
Lipid probe; Two-photon excitation (Gryczynski, I. 291)

Valinomycin
Alanine-analog; Molecular dynamics; Conformation search (Shobana, S. 163)

Wee1
$p13^{suc1}$; Cdc2; Cdc25; Cyclin B; Maturation promoting factor; Cell cycle; Mathematical model (Thron, C.D. 239)

Wettability
Hydrophobin; Interfacial tension; Protein adsorption; *Schizophyllum commune* (Van der Vegt, W. 253)

X-ray scattering
DNA; Osmotic stress; Molecular crowding (Podgornik, R. 111)